



Oregon

Kate Brown, Governor

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December 30, 2016

Also Sent Via E-mail

Mr. Robert J. Wyatt
NW Natural
220 N.W. Second Avenue
Portland, OR 97209

**Re: Hydraulic Control and Containment System Status
Former "Gasco" Site and the Northern Portion of the Siltronic Corporation Facility
Portland, Oregon
ECSI Nos. 84 and 183**

Dear Mr. Wyatt.

The Oregon Department of Environmental Quality (DEQ) is providing our determination regarding the operational status of the Hydraulic Containment and Control (HC&C) system. The letter also presents DEQ's path forward for completing the plans necessary to ensure the success of the system's long-term operation, performance, and effectiveness, and the management of contaminated media and treatment system residuals. DEQ prepared this letter in response to NW Natural's September 9, 2016 e-mail proposing steps and a schedule for finalizing the status of the HC&C system.

HC&C System Operational Status

Based on our review of the hydraulic data collected during the commissioning period (from May 2015 through May 2016), DEQ considers HC&C system commissioning to be complete. Data needed to evaluate system performance and establish operational parameters and protocols, and an operation and maintenance (O&M) schedule, have been collected. Consequently, NW Natural is no longer in a testing phase or commissioning mode. DEQ considers the HC&C system to be operational. EPA concurs with DEQ's determination.

Because of the change in operational status, DEQ is no longer requiring NW Natural to report HC&C system hydraulic data on a monthly basis and/or treatment system residuals data on a quarterly basis. DEQ requests that going forward, NW Natural report hydraulic data and treatment system residuals sampling and analytical results on a semi-annual basis. The first semi-annual reports will cover the time period between June and December 2016. NW Natural and DEQ will develop the reporting schedule for treatment system residuals for this time period and beyond during January 2017.

Regarding the HC&C system hydraulic data packages, DEQ and Anchor agreed during a telephone call on December 7th that data packages for the months of June 2016 through November 2016 will be provided on or before January 15, 2017. The December 2016 package will be provided by February 15, 2017 and will fully incorporate ± 0.1 -feet performance criterion into the data plots (see below).



The schedule for reporting hydraulic data and treatment system residuals for January through June 2017 and beyond will be developed by NW Natural and DEQ in January 2017.

NW Natural should note that the reporting schedule may require periodic adjustment to account for ongoing site operations and data collection. For example, the results of NW Natural's sampling of Rhone Poulenc constituents in extraction well PW-1L and the influent to the Siltronic pre-treatment facility may result in modifications being made to the sampling approach for the HC&C system and treatment system residuals.

Completing Documents Related to Ongoing HC&C Operations

Finalizing the status of the HC&C system involves completing the documents required for system performance, O&M, and material management, as follows:

- Incorporating information and data collected during system commissioning into the:
 - “Hydraulic Control and Containment System Capture Performance and Monitoring Plan – NW Natural Gasco Site,” dated May 1, 2015 (HC&C System PMP);
 - “Hydraulic Control and Containment System Operations and Maintenance Manual, NW Natural Gasco Site,” dated May 1, 2015 (HC&C System O&M Plan); and
 - “Contaminated Materials Management Plan – NW Natural Gasco Site,” dated February 23, 2016 (Gasco Site CMMP).
- DEQ and EPA review and approval of the HC&C System PMP and HC&C System O&M Plan, and DEQ approval of the Gasco Site CMMP.

Completing HC&C system related plans requires revising and updating each submittal as follows:

- Completion of, and incorporation of system commissioning data and/or data analysis into the HC&C System PMP, including but not limited to the following elements:
 - DEQ's December 5, 2016 determination from reviewing NW Natural's “Evaluation of Transducer Drift and Calibration Data” (dated August 5, 2016 [Transducer Data Evaluation]), that the performance criterion for evaluating hydraulic control and containment be modified upward to ± 0.1 -feet from ± 0.05 -feet (i.e., groundwater elevations at monitoring well and piezometer locations should be at least ± 0.1 -feet below river stage to document hydraulic control and containment is occurring);
 - “Proposed Revisions to the NW Natural Gasco Groundwater Monitoring Program” (submitted September 12, 2016, [Monitoring Revisions]) that DEQ commented on by phone on October 6, 2016 and which is to be revised and resubmitted for review; and
 - Deep Alluvium WBZ gradient analysis and particle tracking evaluation included in the “Gasco Groundwater Modeling Report, NW Natural Gasco Site,” dated October 14, 2016 (see DEQ and EPA comments letter issued December 30, 2016).
- Completion of evaluations and documentation of procedures for operating and maintaining the HC&C system, including but not limited to, extraction well operational parameters, rehabilitation, and treatment methods and schedule, and incorporating the information in the HC&C System O&M Plan.

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- Completion of data collection and data analysis relevant to managing material generated during groundwater treatment and incorporating the information into the Gasco Site CMMP, including any modifications based on the results of sampling waste streams and/or presented in the technical memorandum, "Findings from Testing of Gasco Site Groundwater for Rhone Poulenc Constituents" (dated October 12, 2016).

In general, given the data collection and results of work completed during the system commissioning period, the HC&C System PMP and the HC&C System O&M Plan no longer reflect system performance monitoring and/or O&M. DEQ anticipates providing comments on these two documents on or before January 31, 2017. DEQ expects both documents to be revised consistent with our comments and updated to incorporate information developed by NW Natural during commissioning.

Regarding the Monitoring Revisions, NW Natural requested that DEQ review and approve the proposal so any modifications could be implemented during the September 2016 semi-annual monitoring event. During a telephone call on October 6th, I informed Rob Ede (Hahn and Associates) that DEQ did not approve the proposal and that additional information is required for our review and to support NW Natural's proposal. NW Natural and DEQ should arrange a meeting in early January 2017 to discuss the content of the revised Monitoring Proposal. DEQ anticipates that following the meeting NW Natural will prepare and submit the revised version of the proposal.

Regarding the Gasco Site CMMP, DEQ's goal is to provide comments on the Gasco Site CMMP in late-February 2017, however we will need to first evaluate questions and comments received from Siltronic relevant to this document.

DEQ acknowledges this important transition of the HC&C system into an operational mode. In addition, DEQ appreciates the ongoing work NW Natural is conducting to monitor and operate the system. It will be important to finalize the remaining documents so that NW Natural can ensure this complex system remains fully effective into the future.

Please feel free to contact me with questions regarding this letter.

Sincerely,



Dana Bayuk
Project Manager
NW Region Cleanup Section

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ECSI No. 183 File